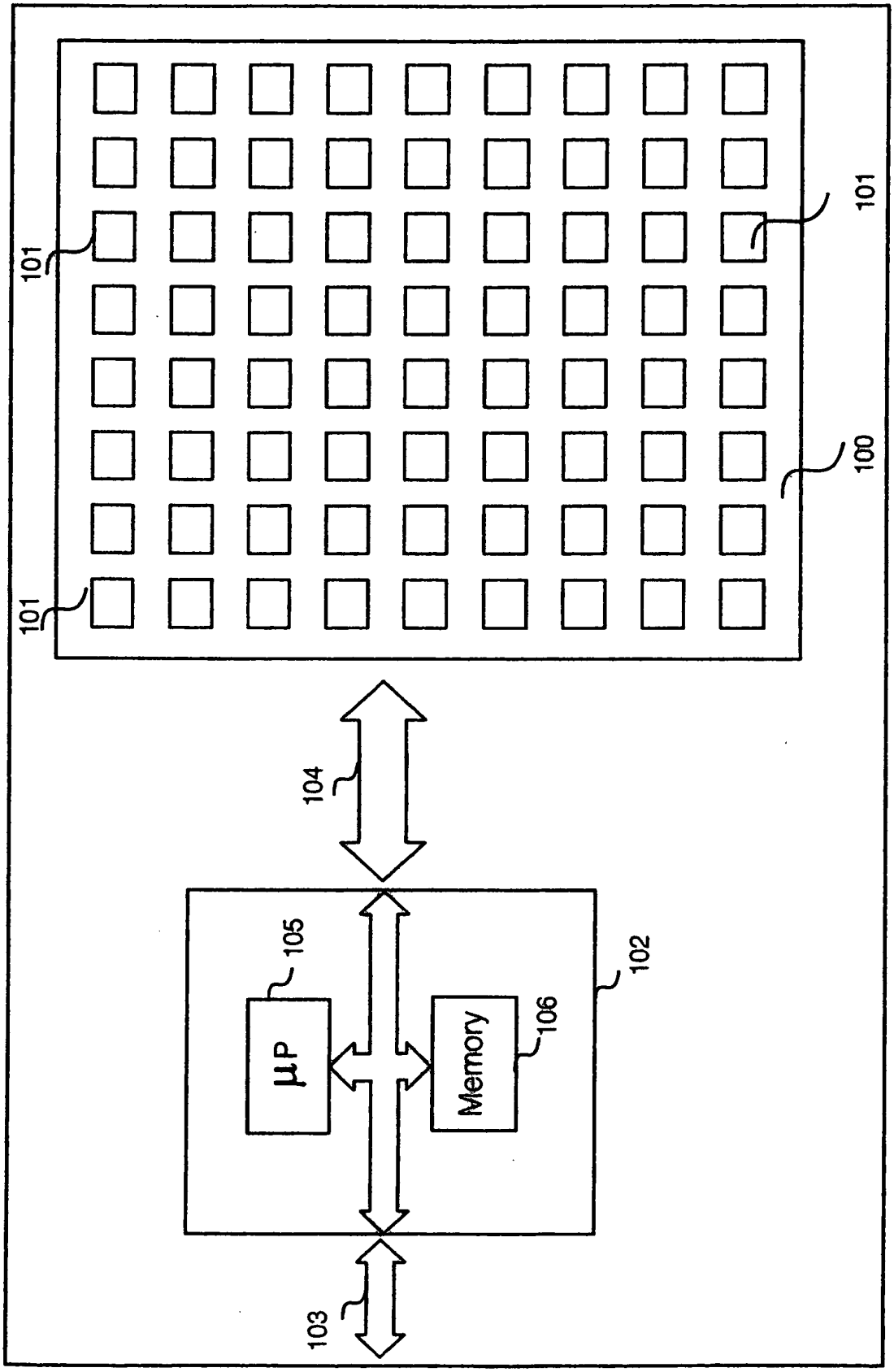

Fig. 1

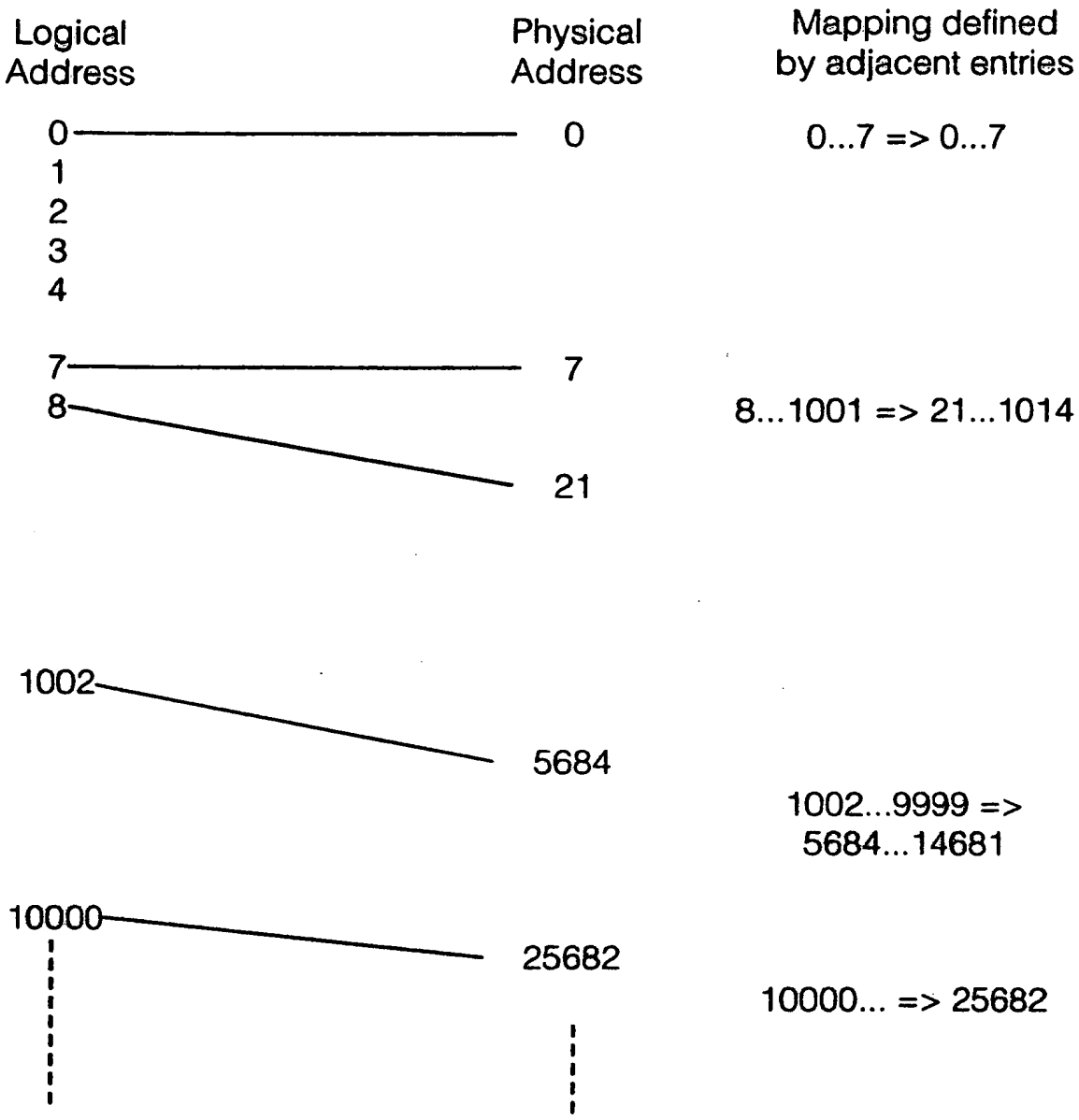
Logical Address
Physical Address
Mapping defined by adjacent entries
0
1
2
3
4
0
0...7 => 0...7
7
7
8
21
8...1001 => 21...1014
1002
5684
1002...9999 => 5684...14681
10000
25682
10000... => 25682

Fig. 2

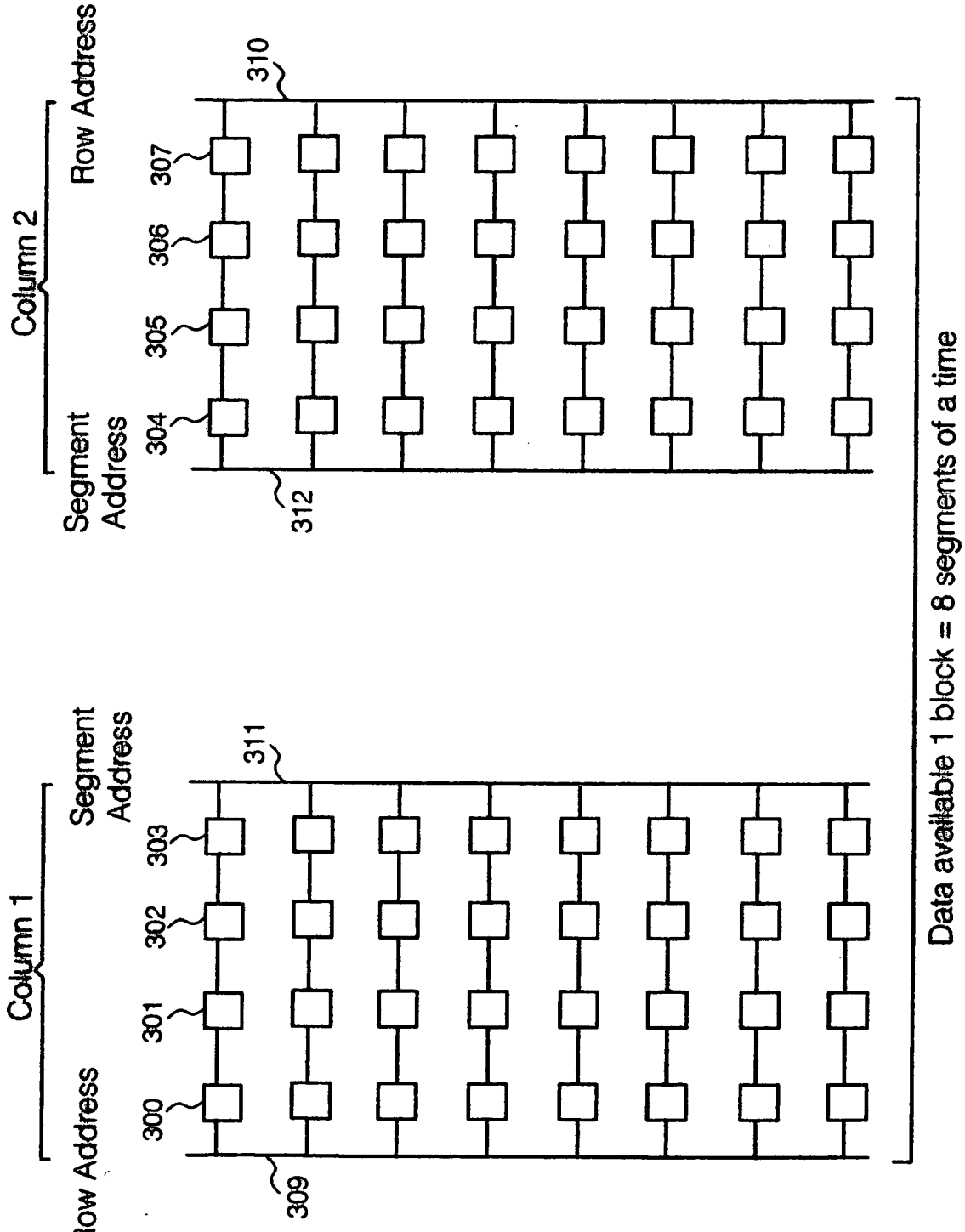
Column 1
Row Address
Segment Address
300
301
302
303
309
311
Column 2
Row Address
Segment Address
304
305
306
307
312
310
Data available 1 block = 8 segments of a time

Fig. 3

<Block address> <Segment address>
<Column 1 Row address > <Column 2 Row address>....

Fig. 4

Now Assume 5690..5699 Turn Bad

Logical Address	Physical Address
0	0
8	21
1002	5684
1008	111000
1018	5700
10000	25682

Fig. 5

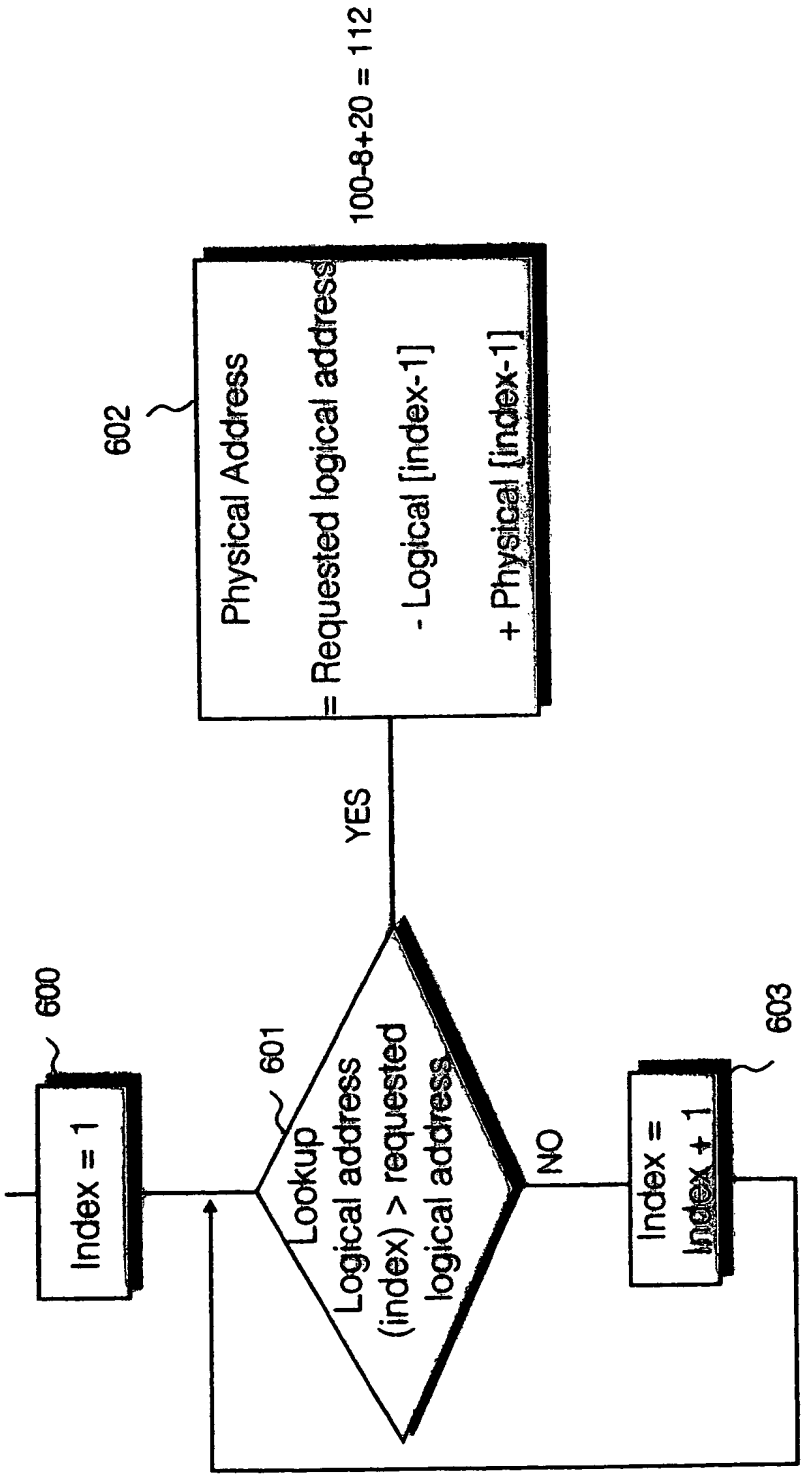
600
Index = 1
601
Lookup
Logical address
(index) > requested
logical address
YES
NO
602
Physical Address
= Requested logical address
- Logical [index-1]
+ Physical [index-1]
100-8+20 = 112
603
Index =
Index + 1

Fig. 6

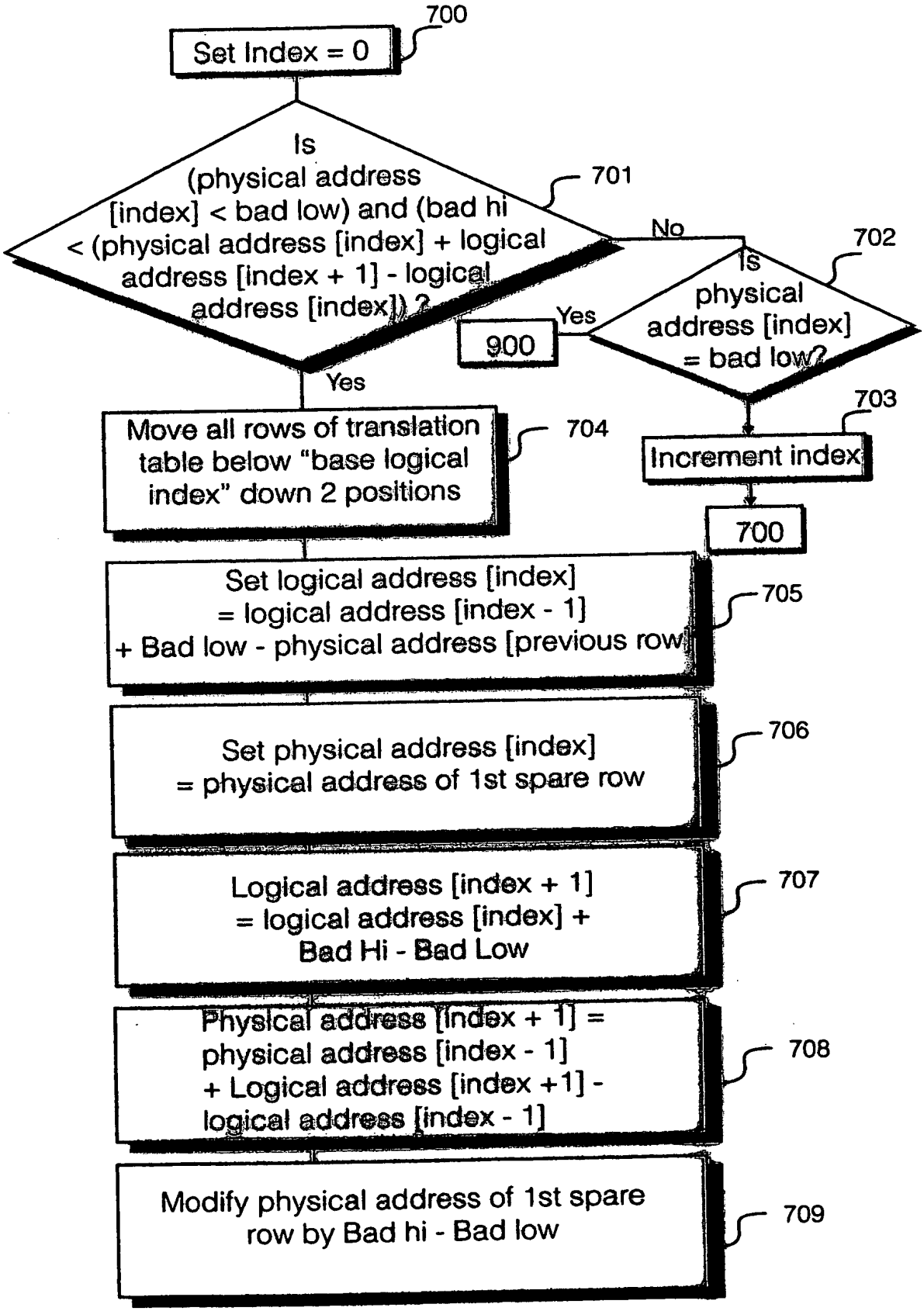
700
Set Index = 0
Is (physical address [index] < bad low) and (bad hi < (physical address [index] + logical address [index + 1] - logical address [index])) ?
701
No
Yes
Is physical address [index] = bad low?
702
900
Yes
Move all rows of translation table below "base logical index" down 2 positions
704
Increment index
703
700
Set logical address [index] = logical address [index - 1] + Bad low - physical address [previous row]
705
Set physical address [index] = physical address of 1st spare row
706
Logical address [index + 1] = logical address [index] + Bad Hi - Bad Low
707
Physical address [index + 1] = physical address [index - 1] + Logical address [index +1] - logical address [index - 1]
708
Modify physical address of 1st spare row by Bad hi - Bad low
709

Fig. 7

Now Assume Addresses 5684 to 5693 Turn Bad

Logical Address	Physical Address	Index
0	0	0
8	21	1
1002	111000	2
1012	5694	3
10000	25682	4

Fig. 8

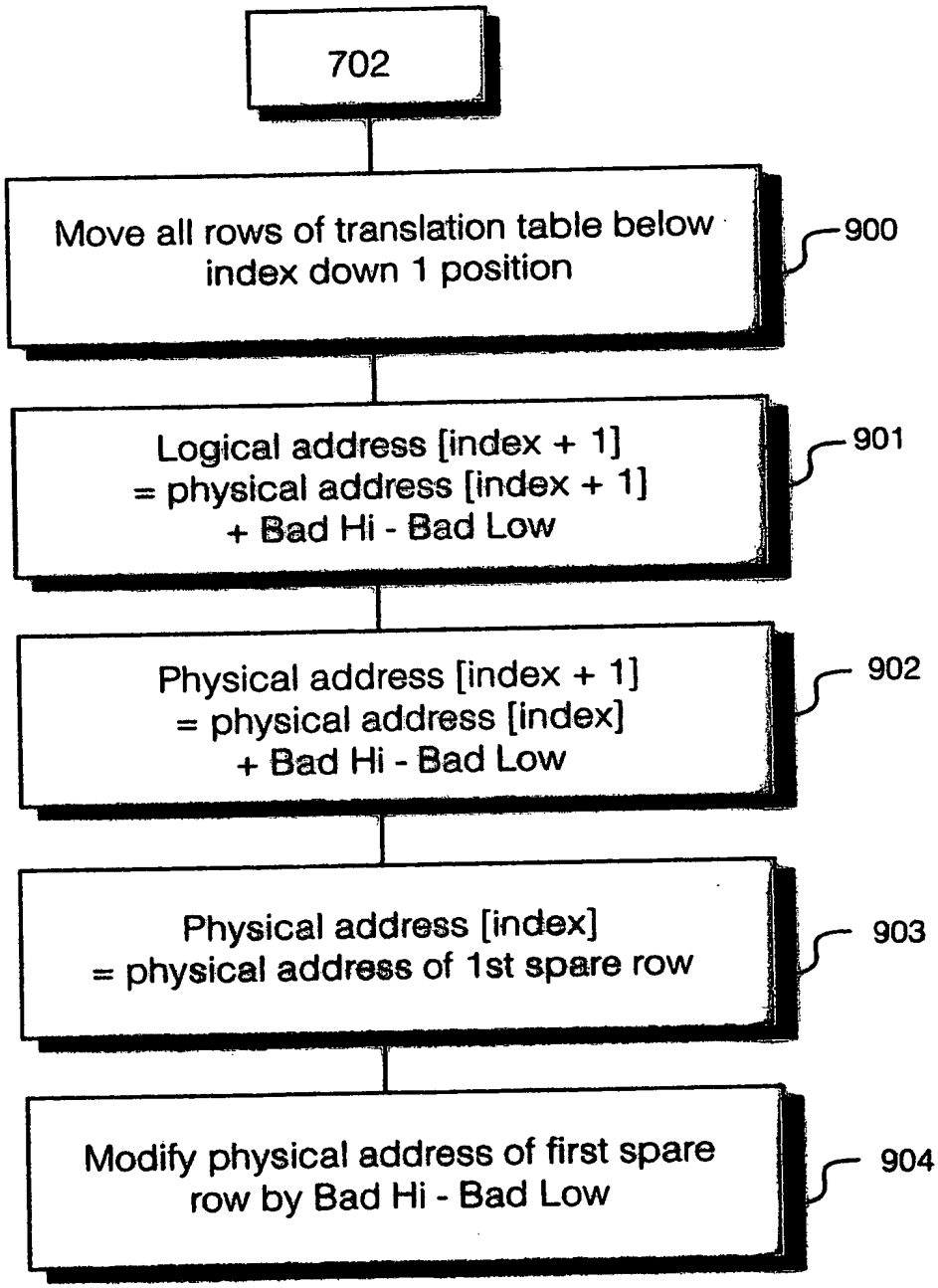
702
Move all rows of translation table below index down 1 position
900
Logical address [index + 1] = physical address [index + 1] + Bad Hi - Bad Low
901
Physical address [index + 1] = physical address [index] + Bad Hi - Bad Low
902
Physical address [index] = physical address of 1st spare row
903
Modify physical address of first spare row by Bad Hi - Bad Low
904

Fig. 9